



Fuel Facts

National Biodiesel Board

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Safer, Cleaner Market for Government Fleets

Biodiesel offers fleet operators a safer, cleaner alternative to petroleum diesel. Biodiesel is made from renewable feed-stocks, such as vegetable oils and animal fats, through a simple refining process. One of the main commodity sources for biodiesel is soybeans, a major crop produced by almost 400,000 farmers in 29 states.

- **Biodiesel is recognized as an alternative fuel.** In its neat form, DOE has acknowledged biodiesel as an alternative fuel. Typically, it is blended with petroleum diesel, but on July 31, 1995, DOE published in the Federal Register its intent to study this question conclusively.
- **Biodiesel operates in conventional engines.** Biodiesel blends operate in diesel engines, from light to heavy-duty, just like petroleum diesel. No engine modifications are required, and biodiesel maintains the payload capacity and range of diesel. Since modifications are not required, there's no need to change vehicles, spare parts inventories, refueling stations or skilled mechanics.
- **Biodiesel has a good transit track record.** More than 100 biodiesel demonstrations, including three one-million-mile tests and thirty-plus 50,000-mile tests, have logged more than 10 million road miles with biodiesel blends. In these tests, performance, fuel mileage and drivability with biodiesel blends were similar to petroleum diesel. In addition, smoke was reduced and the exhaust odor was not as offensive. No adverse durability or engine wear problems were found.
- **Biodiesel cuts down on targeted emissions.** Biodiesel used in a 20 percent blend with petroleum diesel and a catalytic converter will cut air pollution. Particulate matter is reduced 31 percent, carbon monoxide by 21 percent and total hydrocarbons by 47 percent. Biodiesel used in a blend will also reduce sulfur emissions and aromatics.
- **Biodiesel does not require special storage.** In fact, in its pure form or in blends, biodiesel can be stored wherever petroleum diesel is stored, except in concrete-lined tanks. At higher blend levels, biodiesel may deteriorate natural rubber or polyurethane foam materials. Biodiesel also has a higher flash point, handles like diesel and is safe to transport. Users should be sure to verify compatibility with materials exposed to neat biodiesel.
- **Biodiesel costs rank well with other alternatives.** The cost of biodiesel depends on the market price for vegetable oil. In general, biodiesel blended at a 20 percent level with petroleum diesel costs 30-40 cents per gallon more than diesel alone. Given the other advantages of biodiesel, though, an emission management system with biodiesel is the least-cost alternative. A study by Booz-Allen & Hamilton, Inc., found fleets using a 20 percent biodiesel blend would experience lower total annual costs than other alternative fuels. Similarly, results reported by the University of Georgia indicate biodiesel-powered buses are competitive with other alternatively fueled buses with neat biodiesel prices as high as \$3 per gallon.

